

Contents

Invited Presentations

Languages for Parallel Programming	3
Henri Bal (<i>Free University of Amsterdam</i>)	
Relational Algebra Operations	24
Kjell Bratbergsengen (<i>University of Trondheim</i>)	
An Overview of Parallel Strategies for Transitive Closure on Algebraic Machines	44
Filippo Cacace (<i>Politecnico di Milano</i>), Stefano Ceri (<i>Università di Modena</i>), Maurice Houtsma (<i>University of Twente</i>)	
Data Management with Massive Memory: A Summary	63
Hector Garcia-Molina, Robert Abbott, Christopher Clifton, Carl Staelin, Kenneth Salem (<i>Princeton University</i>)	
An Approach to Implement Dynamically Defined Complex Objects	71
Theo Härder (<i>University of Kaiserslautern</i>)	
Experience with MIMD Message-Passing Systems: Towards General Purpose Parallel Computing	99
Anthony Hey (<i>University of Southampton</i>)	
Parallel Associative Processing for Knowledge Bases	112
Simon Lavington (<i>University of Essex</i>)	
Performance Estimates of a Join	124
Suresh Patel (<i>ICL, Manchester</i>)	
The EDS Parallel Relational Database System	149
Paul Watson, Paul Townsend (<i>ICL, Manchester</i>)	

PRISMA Contributions

PRISMA, a Platform for Experiments with Parallelism	169
Peter Apers (<i>University of Twente</i>), Bob Hertzberger (<i>University of Amsterdam</i>), Ben Hulshof, Hans Oerlemans (<i>Philips Research, Eindhoven</i>), Martin Kersten (<i>CWI, Amsterdam</i>)	
The PRISMA Experiment	181
Peter Apers (<i>University of Twente</i>), Bob Hertzberger (<i>University of Amsterdam</i>), Ben Hulshof (<i>Philips Research, Eindhoven</i>)	
Back-End Aspects of a Portable POOL-X Implementation	193
Marcel Beemster (<i>University of Amsterdam</i>)	
Logging and Recovery in PRISMA	229
Carel van den Berg, Martin Kersten (<i>CWI, Amsterdam</i>)	
Parallel Handling of Integrity Constraints	242
Paul Grefen, Jan Flokstra, Peter Apers (<i>University of Twente</i>)	

Performance Analysis of a Dynamic Query Processing Scheme	259
Martin Kersten, Satish Shair-Ali, Carel van den Berg (<i>CWI, Amsterdam</i>)	
Evaluation of a Communication Architecture by Means of Simulation	275
Henk Muller (<i>University of Amsterdam</i>)	
A Parallel Implementation of the EQUIP Expert System	294
Jan Willem Spee (<i>PTT Research, Groningen</i>)	
POOL-X and Its Implementation	309
Juil van der Spek (<i>Philips Research, Eindhoven</i>)	
Automatic Recovery of a Parallel Stable File System	345
Sun Chengzheng, Bob Hertzberger (<i>University of Amsterdam</i>)	
Duplicates and Translation of Nested SQL Queries Into XRA	354
Nanda Verbrugge (<i>CWI, Amsterdam</i>)	
The POOMA Architecture	365
Marnix Vlot (<i>Philips Research, Eindhoven</i>)	
The POOMA Operating System	396
Rogier Wester, Ben Hulshof (<i>Philips Research, Eindhoven</i>)	
Parallel Query Execution in PRISMA/DB	424
Annita Wilschut, Peter Apers, Jan Flokstra (<i>University of Twente</i>)	